

Attorney Docket No.: J3678(C)  
Serial No.: 10/520,394  
Filed: January 4, 2005  
Confirmation No.: 5147

### REMARKS

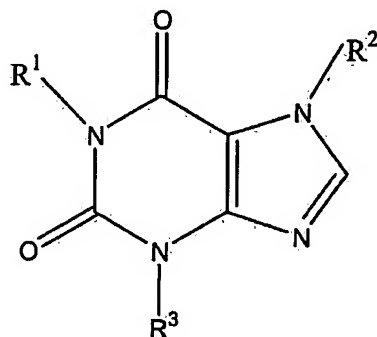
Claims 1 and 20 have been amended to change the first instance of the term "comprising" to --consisting essentially of--. Additionally, these claims have been amended to specify that the hair treatment composition further comprises an aqueous base and one or more additives as therein more particularly described. See, for example, claim 12 and, for a disclosure of the additional optional ingredients, pages 10 to 20. Claim 4 has been recast in independent form with  $R^1$  and  $R^2$  being more particularly identified as being independently selected from H or substituted or unsubstituted  $C_1$  to  $C_5$  alkyl, and  $R^3$  is more particularly identified as substituted or unsubstituted  $C_1$  to  $C_5$  alkyl; the claim has been further amended to specify the composition as further comprising from 0.001 to 10% by weight of a styling polymer. See page, 14, line 29 to page 15, line 2. New claim 20 specifies  $R^1$ ,  $R^2$  and  $R^3$  as being independently selected from substituted or unsubstituted  $C_1$  to  $C_5$  alkyl. Claim 16 has been amended to include a missing comma. Claims 9, 10 and 12 have been amended to change their dependency from claim 1 to claim 4. Claim 11 has been amended to require that a hair styling polymers is present in the hair treatment composition. Entry of these amendments is respectfully requested.

Claims 1-4, 6-12, and 17-19 stand rejected under 35 USC 103(a) as obvious over Barton et al.(WO/96/103847). Claims 1, 5 and 16 stand rejected under 35 USC 103(a) as obvious over Barton et al. in view of Jeanjean (Fr 2751541). These rejections are respectfully traversed.

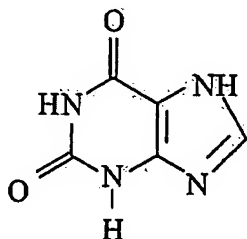
The subject invention is a directed to a method of treating hair to lengthen the hair, decrease the volume of the hair and/or to increase the high humidity style retention of the hair by application to the hair of a particular leave on hair treatment

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composition comprising i) a selected  $\alpha$ -hydroxy acid component, and ii) a xanthine component (in claims 1 and 4, the ratio of component i) to iii) being from 1:0.01 to 0.01:1 and in claim 20, the ratio being 1:3 to 3:1). As described in claim 4 (wherein the hair treatment composition further comprises a styling polymer), the xanthine component ii) comprises a substituted xanthin of the formula:

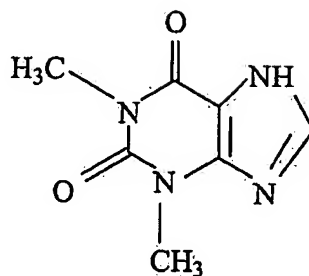


wherein  $R^1$  and  $R^2$  are independently H or a substituted or unsubstituted  $C_1$  to  $C_5$  alkyl and  $R^3$  is a substituted or unsubstituted  $C_1$  to  $C_5$  alkyl. Xanthine is a compound of the formula:

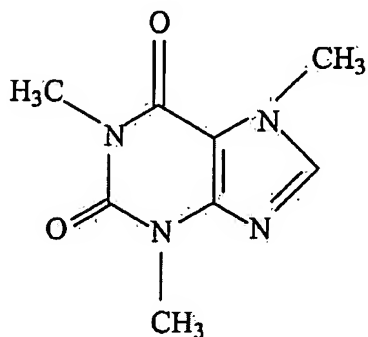


theophylline is a compound of the formula:

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and caffeine is a compound of the formula:



The formula given in claim 4 differs from xanthine and substituted xanthines such as theophylline, in having, as the group R<sup>3</sup>, a **C1 to C5 alkyl** rather than H.

Barton et al. is direct to the compositions for use as a hair stimulant to modify hair growth and/or hair loss. The Barton et al. application discloses seven different classes of materials identified as hair stimulants and identifies as class 3 "A xanthine, such as theophylline, or a derivative thereof, such as methyl silanol theophylline acetate alginate". At page 3, lines 1 to 3 the citation notes "Suitably, at least two, preferably at least three or more of the substances listed are used together, either simultaneously or sequentially." Substituted xanthine compounds as set forth in claims 4, 5, and 20 are not disclosed.

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Moreover there is nothing in Barton et al. that discloses the combination of an  $\alpha$ -hydroxy acid component and xanthine component as described by the subject claims. Barton et al. is concerned with growing hair or preventing hair loss. To the extent that an  $\alpha$ -hydroxy acid such as citric or tartaric acid is disclosed, it is disclosed in the context of the disclosure of citric acid as a buffering agent. There is nothing that discloses or suggests the selection of the claimed combination of  $\alpha$ -hydroxy acid and xanthine component **to lengthen or style hair**. Though product forms that include styling gel, hairspray, hair mousse and hair lacquer are mentioned, there is nothing in Barton et al. that discloses or suggests how hair styling products are to be prepared to provide the hair growing benefits sought by the citation. The examples provided being limited to shampoos or conditioners that contain 20% of a concentrated multi-stimulant-containing complex or a multi-stimulant-containing hair tonic as disclosed at page 7. In fact, the compositions actually exemplified by Barton et al. all contain materials **from each of the seven different classes of hair stimulant** described by the citation.

Jeanjean is directed to the treatment of alopecia through the topical application of a synergistic association of caffeine and one or more alkanoids selected from quinine, a quinidine, cinchonine, cinchonidine, and their salts:

This invention pertains to new dermocosmetic compositions intended particularly for cosmetic treatment of the scalp. More specifically, it concerns synergistic combinations that improve and potentiate the regulation of sebogenesis and stimulation of hair growth by cinchon extracts...

Total cinchona extract has a local antiseptic activity; when applied topically it regulates local bacterium proliferation. In addition, its various alkaloid salts such as quinine, quinidine, cinchonine, or

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cinchonidine are excellent inhibitors of lipase from *corynebacterium acnes*.

This property is of great interest for regulation of sebogenesis, whose proliferation is due to triglyceride metabolism that releases unsaturated fatty acids, which are themselves responsible for the abnormal development of the sebaceous gland.... However, depending on the excipients that are chosen, all the activities mentioned above are often limited because it is difficult for the active ingredients to reach the site of their action because of poor skin penetration...

Unexpectedly, the Applicant has found that the combination of cinchona extract or an extract of its alkaloids with caffeine potentiates their activities, particularly by improving the passage of the cinchona extract through the stratum corneum of the epidermis, while maintaining the activity of the alkaloids it contains. See the translation (previously provided) at page 2, first and last paragraphs and page 3, first, fifth and sixth paragraphs.

Like Bartone et al., there is nothing in Jeanjean that discloses or suggests the combination of xanthine and  $\alpha$ -hydroxy acid components as described by the subject application to provide the improvement in styling benefits herein described. Moreover, the application of caffeine in Jeanjean is very different from that of Bartone et al., namely, in Jeanjean the caffeine is employed **to potentiate the activity of the cinchona extract**, an essential component of the compositions therein described, **by improving the passage of the cinchona extract through the stratum corneum**. In Bartone et al. it is the xanthine derivative itself (exemplified in combination with the six other named "hair stimulants") that is used to stimulate hair growth. Owing to the difference in their intended function, Applicants respectfully refute the Action's contention that the disclosure of caffeine in Jeanjean suggests its use in the Bartone et al. compositions.

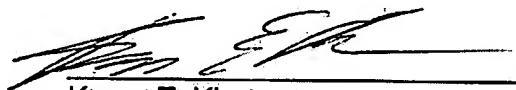
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Even if combined, it is respectfully submitted that the resulting compositions are outside of the language of the "consisting essential of" language of amended claims 1 and 20. As regards claim 4, it is respectfully submitted that the required presence of styling polymer (which commonly adheres to hair and forms a film that aids in providing "hold", with the styling product typically remaining on the outside of the hair), might reasonably be considered as contrary to the application disclosed by Jeanjean, where the caffeine and cinchona extract are intended to be applied to and penetrate the skin.

In light of the above amendments and remarks, reconsideration and allowance of the subject claims is respectfully requested.

If a telephone conversation would be of assistance in advancing the prosecution of the present application, applicants' undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,



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